

## LRFD Section 5.2

New: January 2005

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March 11, 2005

**Subject:** Practical Design Initiative

Intermediate encased pile cap bents

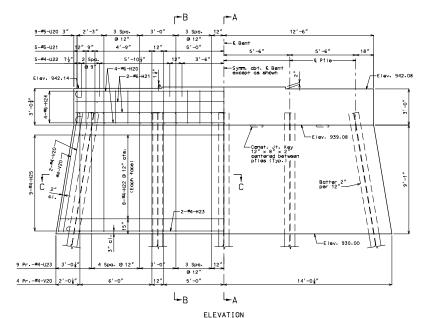
A designer may consider the use of encased pile cap bents for intermediate bents as shown in the attached example.

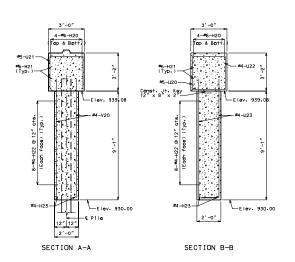
Encased pile cap bents could prove to be an economical structurally desired bent for the following conditions:

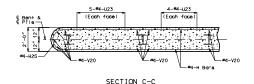
- The encasement would be beneficial at locations where drift is a concern.
- The encasement would also assist in providing a larger radius of gyration and therefore a decrease in buckling potential for locations where the exposed unbraced column length is large.

If this type of intermediate bent is being considered, the structural project manager or structural liaison engineer should be consulted regarding battering of piles and other details of the proposed installation.









Notes: For details of Intermediate Bent No. 2 not shown, see Sheet No. 8.

For Substructure Quantity Table for Bent No. 2, see Sheet No. 8.

DETAILS OF INTERMEDIATE BENT NO. 2





March 15, 2005

**Subject:** Practical Design Initiative

Omitting bridge approach slabs for projects on low-traffic routes.

The following provides interim guidance for when it is appropriate to omit bridge approach slabs that would have otherwise be considered standard for projects. This information is being disseminated in this form to provide information to meet the immediate needs of MoDOT staff.

During a series of Practical Design meetings held in recent months around the state, the Chief Engineer has provided direction that bridge approach slabs are not needed for projects located on low traffic volume routes. The Bridge Division has taken additional steps to request information from the Divisions of Maintenance and Construction in order to facilitate development of more detailed policy in this area. The following guidance has been developed to assist designers in the interim until the response information from the other affected Divisions is received which could be useful as a basis for future refinements to MoDOT practice in this area.

The following guideline should be used for new projects where the design has not been started, and also for the review and/or re-design of individual projects involved in the current Practical Design effort.

## **Guideline for Omitting Bridge Approach Slabs**

Bridge approach slabs may be omitted when the traffic count is less than 500 ADT.

If the approach slab is omitted, the standard details for bridge abutments and end bents shown in the Bridge Manual, including the customary corbel along the fill face of the end bents will continue to be used.

If a situation exists based on the conditions of the individual project where it is advisable advantageous to vary from the above guidelines based on good engineering practice, submit a design variance with the design reasoning to the Bridge Division for documentation purposes and approval.